

Title (en)

Apparatus and method for sampling frequency offset estimation and correction in a wireless communication system

Title (de)

Vorrichtung und Verfahren zur Schätzung und Korrektur der Abtastfrequenz in einem drahtlosen Kommunikationssystem

Title (fr)

Dispositif et procédé pour l'estimation et correction de la fréquence d'échantillonnage dans un système de communication sans fil

Publication

**EP 1734712 A3 20080123 (EN)**

Application

**EP 06005744 A 20060321**

Priority

- US 69128005 P 20050617
- US 31251005 A 20051221

Abstract (en)

[origin: EP1734712A2] A method is described for correcting sampling frequency offset (SFO) of a data packet in a communications system where carrier frequency ( $f_c$ ) and sampling frequency ( $f_s$ ) are driven by a common clock source. The method comprises, for each  $l$ th symbol in the data packet, estimating carrier frequency offset (CFO) in a received data packet. From the CFO estimate, an SFO estimate is derived, wherein the SFO is approximately equal to  $f_s$  multiplied by said CFO estimate, and divided by  $f_c$ . An SFO phase correction is generated according to the SFO estimate for each  $k$ th tone in a data stream. The SFO phase correction is then applied to each received data stream.

IPC 8 full level

**H04L 27/26** (2006.01)

CPC (source: EP US)

**H04L 27/2657** (2013.01 - EP US); **H04L 27/2675** (2013.01 - EP US); **H04L 27/2679** (2013.01 - EP US); **H04L 2027/003** (2013.01 - EP US); **H04L 2027/0059** (2013.01 - EP US); **H04L 2027/0067** (2013.01 - EP US); **H04L 2027/0095** (2013.01 - EP US)

Citation (search report)

- [X] EP 0969636 A1 20000105 - LUCENT TECHNOLOGIES INC [US]
- [A] US 2004109508 A1 20040610 - JEON TAEHYUN [KR], et al

Cited by

EP2306679A1; WO2011041190A1; WO2009152395A3

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1734712 A2 20061220**; **EP 1734712 A3 20080123**; CN 1881823 A 20061220; CN 1881823 B 20141029; TW 200715703 A 20070416; TW I336992 B 20110201; US 2007002981 A1 20070104; US 2007140212 A1 20070621; US 7177374 B2 20070213; US 8085876 B2 20111227

DOCDB simple family (application)

**EP 06005744 A 20060321**; CN 200610092478 A 20060531; TW 95121682 A 20060616; US 31251005 A 20051221; US 70514607 A 20070212